

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

Date of mailing (day/month/year) 21 August 2001 (21.08.01)	
International application No. PCT/EP00/09677	Applicant's or agent's file reference MPD309/PCT/RS
International filing date (day/month/year) 04 October 2000 (04.10.00)	Priority date (day/month/year) 07 October 1999 (07.10.99)
Applicant HATCHMAN, Kevan et al	

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

02 May 2001 (02.05.01)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Zakaria EL KHODARY Telephone No.: (41-22) 336.83.38
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(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



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12 April 2001 (12.04.2001)

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WO 01/25378 A3

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7/06, 7/48

(74) Agent: **SAVIDGE, Roger, Gordon, Madgwick**; Rhodia Consumer Specialties Limited, 210-222 Hagley Road West, Oldbury, West Midlands B68 0NN (GB).

(21) International Application Number: PCT/EP00/09677

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(71) Applicant (*for all designated States except US*): **RHO-DIA CONSUMER SPECIALTIES LIMITED** trading as **ALBRIGHT & WILSON SURFACTANTS EUROPE** [GB/GB]; 210-222 Hagley Road West, Oldbury, West Midlands B68 0NN (GB).

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Published:

with international search report

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **HATCHMAN, Kevin** [GB/GB]; 5 Byland Close, Friarscroft, Bromsgrove, Worcestershire B61 7PL (GB). **CROMBIE, Richard, Llewelyn** [GB/GB]; 201 Court Oak Road, Harborne, Birmingham B17 9AD (GB). **HAWKINS, John** [GB/GB]; 21 Chandler Avenue, Kinver, South Staffs DY7 6AG (GB).

(88) Date of publication of the international search report:
2 May 2002

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 01/25378 A3

(54) Title: STRUCTURED SURFACTANT SYSTEMS CONTAINING PEARLISERS

(57) Abstract: The protolamellar phase (a disc micellar, optically isotropic phase which exhibits transient anisotropy under stress) is capable of suspending solid particles. It is particularly effective for suspending pearlisers.

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PATENT COOPERATION TREATY

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference MPD309/PCT/RS	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 00/09677	International filing date (day/month/year) 04/10/2000	(Earliest) Priority Date (day/month/year) 07/10/1999
Applicant RHODIA CONSUMER SPECIALTIES LIMITED TRADING AS		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

STRUCTURED SURFACTANT SYSTEMS CONTAINING PEARLISERS

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.



None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No.

EP 00/09677

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 A61K7/50 A61K7/06 A61K7/48

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2 759 607 A (HENKEL KGAA) 21 August 1998 (1998-08-21) page 3, line 4-22 page 4, line 7 -page 5, line 9 page 6, line 16 -page 7, line 10 page 14, line 3-33 table 1 --- -/--	1-3



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *G* document member of the same patent family

Date of the actual completion of the international search

20 September 2001

Date of mailing of the international search report

04/10/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
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Authorized officer

Bazzanini, R

INTERNATIONAL SEARCH REPORT

International Application No

P. 00/09677

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication where appropriate, of the relevant passages	Relevant to claim No.
X A	DE 36 17 306 A (LION CORP) 27 November 1986 (1986-11-27) claims 1,3,4 page 5, line 34 -page 6, line 17 page 7, line 26 -page 8, line 7 page 8, line 19-31 page 9, line 4-6 page 10, line 33 -page 11, line 15 page 12, line 7 -page 14, line 15 example 1; table III page 18, line 1-19 examples 19,20; table V ---	1-3 4-6
X A	DATABASE WPI Section Ch, Week 198244 Derwent Publications Ltd., London, GB; Class D21, AN 1982-94137E XP002170056 & JP 57 156410 A (LION CORP), 27 September 1982 (1982-09-27) abstract ---	1-3 4-6
X A	DE 41 03 551 A (HENKEL KGAA) 13 August 1992 (1992-08-13) page 4, line 60-63 page 5, line 9-11 page 5; examples 1-3 table 1 claims 1,12,13 ---	1-3
X A	GB 1 230 413 A (FARBWERKE HOECHST AKTIENGESELLSCHAFT) 5 May 1971 (1971-05-05) page 1, line 11-19,30-37,43-52 page 1, line 84 -page 2, line 10 page 2, line 19-31 examples 1,2 claims 6,10,11,14 ---	1-3 4-6
X A	US 4 486 334 A (HORIUCHI TERUO ET AL) 4 December 1984 (1984-12-04) column 1, line 7-10 column 2, line 61 -column 3, line 2 column 3, line 46 -column 4, line 46 examples 1,2 claims 1,4,6,7 --- -/--	1-3 6

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/09677

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 95 03782 A (ICI AUSTRALIA OPERATIONS ;JONES PAMELA JOYCE (AU); LOMBARD ANNE MA) 9 February 1995 (1995-02-09)	1-3
A	page 4, line 3-20 page 6, line 26-29 page 7, line 4-25 example ALL claims 3,12,13,24 -----	6

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No



PCT/EP 00/09677

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
FR 2759607	A	21-08-1998	DE 19705862 C1	25-06-1998
			AU 6099898 A	08-09-1998
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DE 3617306	A	27-11-1986	JP 1673561 C	12-06-1992
			JP 3034800 B	23-05-1991
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			AT 125149 T	15-08-1995
			AU 652027 B2	11-08-1994
			AU 1174492 A	07-09-1992
			BR 9205543 A	03-05-1994
			CA 2103578 A1	07-08-1992
			DE 59202960 D1	24-08-1995
			DK 570398 T3	04-12-1995
			WO 9213512 A1	20-08-1992
			EP 0570398 A1	24-11-1993
			ES 2074871 T3	16-09-1995
			GR 3017037 T3	30-11-1995
			JP 6504781 T	02-06-1994
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GB 1230413	A	05-05-1971	AT 295002 B	15-11-1971
			BE 717787 A	08-01-1969
			CH 513973 A	15-10-1971
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			FR 1574317 A	11-07-1969
			NL 6809324 A	09-01-1969
US 4486334	A	04-12-1984	JP 1580665 C	11-10-1990
			JP 2006731 B	13-02-1990
			JP 57165308 A	12-10-1982
			DE 3212420 A1	14-10-1982
WO 9503782	A	09-02-1995	AU 673099 B2	24-10-1996
			AU 7340394 A	28-02-1995
			WO 9503782 A1	09-02-1995
			CA 2168346 A1	09-02-1995
			NZ 269755 A	24-10-1997

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference CDK1860	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP00/09677	International filing date (day/month/year) 04/10/2000	Priority date (day/month/year) 07/10/1999
International Patent Classification (IPC) or national classification and IPC A61K7/50		
Applicant RHODIA CONSUMER SPECIALTIES LIMITED TRADING AS		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none">I <input checked="" type="checkbox"/> Basis of the reportII <input type="checkbox"/> PriorityIII <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicabilityIV <input type="checkbox"/> Lack of unity of inventionV <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statementVI <input type="checkbox"/> Certain documents citedVII <input checked="" type="checkbox"/> Certain defects in the international applicationVIII <input checked="" type="checkbox"/> Certain observations on the international application		
Date of submission of the demand 02/05/2001	Date of completion of this report 18.01.2002	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Culmann, J-C Telephone No. +49 89 2399 8487 	

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP00/09677

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-8 as originally filed

Claims, No.:

1-6 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP00/09677

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	4-6
	No:	Claims	1-3
Inventive step (IS)	Yes:	Claims	4-6
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-6
	No:	Claims	

2. Citations and explanations **see separate sheet**

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

HarCor#2

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability

Preliminary considerations

1. The claims are prone to interpretation.

The Examining Authority interprets the term "protolamellar" as meaning that (since the ancient Greek prefix "proto" means "the first") some of the surfactant forms a lamellar phase.

This interpretation is confirmed by the various statements found in the application itself.

The invention is based on the findings that

- while the amount of surfactant is such that in absence of electrolyte it would form a clear L_1 phase or protohexagonal phase exhibiting hexagonal symmetry
- the amount of electrolyte introduced is such that a clear, protolamellar phase (this phase is thus lamellar) exhibiting lamellar symmetry is formed, though this phase is less viscous than normal G phase.

It may be noted that both the L_1 and M phases are of hexagonal symmetry; and the G phase is of lamellar symmetry.

The Applicant himself acknowledges that the concentration of alkyl ether sulfate must be of about 55 to 60% by weight in order to achieve the G phase; but when sufficient electrolyte is added, a similarly structured phase is achieved.

In other words: the presence of some electrolyte results in the formation of a sort of a G phase and thus compensates for the lesser amount of surfactant.

2. As to the method described on page 6 of the present application, it appears that the Applicant makes first a G phase, as is clear from the concomitant presence of at least 80 to 90% of the surfactant, a part of the necessary water, and the electrolyte.

Subsequently, the remaining surfactant and water are added.

It must thus be concluded that the final structure of the thus produced concentrate is that of the first steps, though somewhat altered by the dilution step: a G phase.

As to novelty (Article 33(2) PCT)

Document D1 (FR A 2 759 607) describes (see the examples) pearlescent concentrates made by first charging a G phase of sodium laureth sulfate, then charging the pearlescent agent, heating, agitation, and cooling. The final result is a clear, of high optical characteristic, pearlescent concentrated composition, which is then diluted (to an solid active matter content of 35% by weight).

Because of the characteristics and processing method, it must be concluded that here also a "protolamellar aqueous surfactant" composition having suspended pearlescent particles has been produced.

Said composition has thus been used to suspend solid particles, more particularly pearlisers.

Thus the subject-matter of claims 1 to 3 lacks novelty.

This conclusion results actually in the wording of the claims, which is so broad that it encompasses subject-matter beyond the investigations of the Applicant. While the broad wording of the claims could have been objected on the basis of Article 6 EPC, the objection above about novelty has been made, because applicants (in general) are reluctant to consider clarity as an important matter...

As to inventive step (Article 33(3) PCT)

The closest state of the art is D1.

While D1 aims at similar pearlescent compositions, it is based on the use of neat G phase surfactant in the early stage of the process. That is clear from D1, on page 4, lines 9 to 12: the surfactant must be concentrated (60 to 90% by weight).

The Applicant obviously follows this processing path, they use also a surfactant in the G phase, they however achieve this phase by the addition of electrolyte rather than by using a highly concentrated surfactant. Hence the necessary amount of electrolyte. It is also worth noting that D1 is silent about the presence/role of electrolyte for the therein disclosed compositions and process.

As a consequence, the subject-matter of the present application may be regarded as related to alternatives (product and process) to D1.

Would have the man skilled in the art considered G phase surfactants made from electrolyte and lower levels of surfactants as an obvious alternative ?

The Examining Authority considers that the author of D1 has some competence in the field; had he only stated that the phase structure (G phase) of the surfactant was the only prerequisite and had he let latitude to the skilled reader to determine himself the way such a phase could be done, then the Examining Authority would have concluded to the lack of an inventive step of the whole application. But that is not the case. The author of D1 further specifies that the surfactant which is to be used must be a neat G phase. Implicitly, said author acknowledges that no other G phase surfactant may be suitable. It results from this consideration that the alternatives claimed by the Applicant were beyond the belief of the author of D1, and hence, they are very likely beyond the normal skill of the artisan in this field.

Therefore the Examining Authority concludes that the subject-matter of claims 4 to

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP00/09677

6 involves an inventive step.

The Applicant was thus respectfully requested to redraft claims 1 to 3 accordingly, and to adapt the description thereto. He refrained from doing so.

VII. Certain defects in the international application.

The requirements of Rule 5.1 a) ii) PCT are not met, document D1 being not identified in the description and the relevant background art disclosed therein being not briefly discussed.

VIII. Certain observations on the international application.

In claims 4 and 5, the particle sizes lack support from the description.

More generally, claims 4 and 5 lack support from the description, as a whole (i.e. a combination of specific features) though some of the individual features may be found therein.